RICCA CHEMICAL COMPANY®

Safety Data Sheet

Classified According to OSHA Hazard Communication Standard (HCS 2024)

SECTION 1: Identification

1.1. Product Identifier

Trade Name or Designation HydroSpec® Titrant T2
For Two Component Volumetric Titrations with Lower Moisture Content
Product Number RK250000
Other Identifying Product Numbers RK250000-1C

1.2. Recommended Use and Restrictions on Use

General Laboratory Reagent

1.3. Details of the Supplier of the Safety Data Sheet

Company Ricca Chemical Company
Address 412 West Fork Drive

Arlington, TX 76012 USA

Telephone 888-467-4222

1.4. Emergency Telephone Number (24 hours)

CHEMTREC (USA) 800-424-9300
CHEMTREC (International) 1+ 703-527-3887

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SECTION 2: Hazard(s) Identification

2.1. Classification of the Substance or Mixture

Hazard Class	Category	Hazard Statements	Precautionary Statements
Acute Toxicity - Oral	Category 3	H301	P264,P270,P301+P310,P321,P330, P405,P501
Acute Toxicity - Dermal	Category 3	H311	P280,P302+P352,P312,P321, P361+P364,P405,P501
Acute Toxicity - Inhalation (Vapors)	Category 3	H331	P261,P271,P304+P340,P311, P321,P403+P233,P405,P501
Flammable Liquids	Category 2	H225	P210,P233,P240,P241,P242,P243, P280,P303+P361+P353,P370+P378, P403+P235,P501
Serious Eye Damage / Eye Irritation	Category 2	H319	P264,P280,P305+P351+P338, P337+P313
Reproductive Toxicity	Category 1B	H360	P201,P202,P280,P308+P313,P405, P501
Specific Target Organ Toxicity - Single Exposure	Category 2	H371	P260,P264,P270,P308+P311, P405,P501
Specific Target Organ Toxicity - Single Exposure - Transient Effects	Category 3 - Narcotic Effects	H336	P261,P271,P304+P340,P312, P403+P233,P405,P501
Specific Target Organ Toxicity - Repeated Exposure	Category 1	H372	P260,P264,P270,P314,P501
Hazardous to the Aquatic Environment, Short-term (Acute)	Acute 2	H401	P273,P501

2.2. GHS Label Elements

Pictograms:

Signal Word: **Danger**

Hazard Statements:

NOTE: Hazard statements may be combined on labels to improve clarity and readability.

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Hazard Number	Hazard Statement
H225	Highly flammable liquid and vapor
H301+H311+H331	Toxic if swallowed, in contact with skin or if inhaled
H319	Causes serious eye irritation
H336	May cause drowsiness or dizziness
H360	May damage fertility or the unborn child
H371	May cause damage to organs
H372	Causes damage to organs through prolonged or repeated exposure
H401	Toxic to aquatic life

Precautionary Statements:

NOTE: Precautionary statements may be combined or consolidated on labels to improve clarity and readability.

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Prevention

Precautionary Number	Precautionary Statement
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P240	Ground and bond container and receiving equipment.
P241	Use explosion-proof equipment.
P242	Use non-sparking tools.
P243	Take action to prevent static discharge.
P260	Do not breathe fumes or mist.
P264	Wash hands, arms, and face thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves and eye protection.

Response

Precautionary Number	Precautionary Statement
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P311	If exposed or concerned: Call a poison center or doctor.
P314	Get medical advice or attention if you feel unwell.
P330	Rinse mouth.
P337+P313	If eye irritation persists: Get medical advice or attention.
P361+P364	Take off immediately all contaminated clothing and wash it before reuse.
P370+P378	In case of fire: Use dry chemical, foam, or carbon dioxide to extinguish.

Storage

Precautionary Number	Precautionary Statement
P403+P233+P235	Store in a well-ventilated place. Keep container tightly closed. Keep cool.
P405	Store locked up.

Disposal

Precautionary Number	Precautionary Statement
P501	Dispose of contents/container to suitable waste stream in accordance with local, state, federal, and international regulations.

2.3. Hazards not Otherwise Classified

No other hazards identified.

2.4. Ingredients of Unknown Acute Toxicity

This product does not contain any ingredients of unknown acute toxicity.

SECTION 3: Composition / Information on Ingredients

3.1. Components of Mixture

Chemical Name (IUPAC)	Common Name and Synonyms	CAS Number	Weight%
methanol	Methyl Alcohol	67-56-1	95.00
iodine	Iodine	7553-56-2	5.00

SECTION 4: First-Aid Measures

4.1. Description of Necessary Measures

Eye Contact: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. May cause irritation with burning and stinging with possible damage to the cornea and conjunctiva.

Ingestion: IF SWALLOWED: Immediately call a POISON CENTER or doctor. Dilute immediately with water or milk. Induce vomiting. Call a physician.

Inhalation: IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Skin Contact: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Results in drying and cracking which can lead to secondary infections and dermatitis. Dermal absorption causes many of the symptoms of inhalation.

4.2. Most Important Symptoms and Effects, Acute and Delayed

May damage fertility or the unborn child Flammable liquid. Primarily toxic by ingestion. Cannot be made non-poisonous. If ingested, give large quantity of water and induce vomiting. Call a physician. Contact may cause dryness and cracking of the skin. May cause irritation to the eyes. Wash areas of contact with water. May cause irritation to the respiratory system. EYE CONTACT: May cause irritation with burning and stinging with possible damage to the cornea and conjunctiva. SKIN CONTACT: Results in drying and cracking which can lead to secondary infections and dermatitis. Dermal absorption causes many of the symptoms of inhalation.

4.3. Immediate Medical Attention or Special Treatment Needed

Irrigate immediately with large quantity of water for at least 15 minutes. Call a physician if irritation develops. Remove to fresh air. Give artificial respiration if necessary. If breathing is difficult, give oxygen. Wash areas of contact with soap and water for at least 15 minutes. Call a physician if irritation develops. Dilute immediately with water or milk. Induce vomiting. Call a physician.

SECTION 5: Fire-Fighting Measures

5.1. Extinguishing Media

In case of fire: Use dry chemical, foam, or carbon dioxide to extinguish. Water, dry chemical, foam, or carbon dioxide. Water spray may be used to keep fire-exposed containers cool.

5.2. Specific Hazards Arising from the Substance or Mixture in a Fire

Highly flammable liquid and vapor Moderate explosion hazard and dangerous fire hazard when exposed to heat, sparks and open flames. Above flash point, vapor-air mixtures are explosive within flammable limits noted above. Sensitive to static discharge.

5.3. Special Protective Equipment and Precautions for Firefighters

Wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

SECTION 6: Accidental Release Measures

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Ground and bond container and receiving equipment. Use explosion-proof equipment. Use non-sparking tools. Take action to prevent static discharge. Wear protective gloves and eye protection.

6.2. Cleanup and Containment Methods and Materials

Remove all sources of ignition. Contain spill. Do not flush to sewer. Absorb with suitable inert material (vermiculite, dry sand, etc) and place in a chemical waste container for proper disposal in an approved waste disposal facility. Ventilate area of spill. Have extinguishing agent available in case of fire. Use non-sparking tools and equipment. Dispose of in accordance with local regulations.

SECTION 7: Handling and Storage

7.1. Precautions for Safe Handling and Storage Conditions

Store in a well-ventilated place. Keep container tightly closed. Keep cool. Store locked up. As with all chemicals, wash hands thoroughly after handling. Avoid contact with eyes and skin. Protect from freezing and physical damage. Store in secure, flammable storage area away from all sources of ignition. Empty containers may be hazardous since they retain product residues.

SECTION 8: Exposure Controls / Personal Protection

8.1. Exposure Limits

U.S. OSHA - Permissible Exposure Limits (PEL) - Time Weighted Averages (TWA)

Chemical Name	CAS Number	Exposure Limit
Methyl Alcohol	67-56-1	200 ppm TWA; 260 mg/m3 TWA

U.S. OSHA - Permissible Exposure Limits (PEL) - Ceiling Limits

Chemical Name	CAS Number	Exposure Limit
Iodine	7553-56-2	0.1 ppm Ceiling; 1 mg/m3 Ceiling

U.S. OSHA - Permissible Exposure Limits (PEL) - Short Term Exposure Limits (STEL)

No limits found.

U.S. OSHA - Specifically Regulated Chemicals

No limits found.

ACGIH - Threshold Limit Values - Ceilings (TLV-C)

No limits found.

ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)

Chemical Name	CAS Number	Exposure Limit
Methyl Alcohol	67-56-1	250 ppm STEL

ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)

Chemical Name	CAS Number	Exposure Limit
Methyl Alcohol	67-56-1	200 ppm TWA
Iodine	7553-56-2	0.001 ppm TWA (inhalable fraction and vapor, as I)

8.2. Engineering Controls

Use only outdoors or in a well-ventilated area. A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limit. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source. Use explosion proof equipment.

8.3. Individual Protective Measures and Personal Protective Equipment

Respiratory Protection: If engineering controls do not maintain airborne concentrations below recommended exposure limits, an approved atmosphere supplied respirator must be worn.

Skin Protection: Chemical resistant gloves.

Eye Protection: Safety glasses or goggles.

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SECTION 9: Physical and Chemical Properties

9.1. Basic Physical and Chemical Properties

Physical State:	Liquid
Color:	Dark Brown
Odor:	Data not available.
Odor Threshold:	Data not available.
Melting/Freezing Point:	Data not available.
Boiling Point/Range:	65°C at 1013hPa (760mmHg)
Flammability:	Data not available.
Flammability/Explosive Limits:	Data not available.
Flash Point:	9.7 °C closed cup (ECHA_API)
Auto-Ignition Temperature:	Data not available.
Decomposition Temperature:	Data not available.
pH:	5.0-6.0 at 20°C
Kinematic Viscosity:	Data not available.
Solubility:	Data not available.
Vapor Pressure:	Data not available.
Evaporation Rate:	Data not available.
Relative Density:	0.89
Relative Vapor Density:	Data not available.
Particle Characteristics:	Data not available.
Partition Coefficient n-octanol/water, log	Data not available.

SECTION 10: Stability and Reactivity

10.1. Reactivity and Chemical Stability

Stable under normal conditions of use and storage.

10.2. Possibility of Hazardous Reactions

Data not available.

10.3. Conditions to Avoid and Incompatible Materials

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Oxidizing agents, Alkali metals, Acid chlorides, Acid anhydrides, Reducing agents, Acids, heat, sparks and open flame.

10.4. Hazardous Decomposition Products

Will not occur. May form carbon oxides, nitrogen oxides, sulfur oxides, hydrogen iodide, hydrogen cyanide (hydrocyanic acid) in the case of fire.

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SECTION 11: Toxicological Information

11.1. Information on Toxicological Effects

Acute Toxicity - Oral Exposure:

Oral acute toxicity estimate (ATE): 105 mg/kg(calculated)

Chemical Name	CAS Number	Toxicity
Methyl Alcohol	67-56-1	Oral LD50 Acute Toxicity Estimate 100 mg/kg (Source: ECHA)
Iodine	7553-56-2	Oral LD50 Rat 14 g/kg (Source: NLM_CIP)

Acute Toxicity - Dermal Exposure:

Dermal acute toxicity estimate (ATE): 312 mg/kg(calculated)

Chemical Name	CAS Number	Toxicity
Methyl Alcohol	67-56-1	Dermal LD50 Acute Toxicity Estimate 300 mg/kg (Source: ECHA)
Iodine	7553-56-2	Dermal LD50 Rabbit 1425 mg/kg (males, Source: ECHA_API); Dermal LD50 Rabbit >2000 mg/kg (females, Source: ECHA_API)

Acute Toxicity - Inhalation Exposure:

Inhalation acute toxicity estimate (ATE, vapor): 3.1579 mg/L, 4 h(calculated); Inhalation acute toxicity estimate (ATE, dust or mist): 91.7600 mg/L, 4

Chemical Name	CAS Number	Toxicity
Methyl Alcohol	67-56-1	Inhalation LC50 Acute Toxicity Estimate 3 mg/L 4 h (Source: ECHA)
Iodine	7553-56-2	Inhalation LC50 Rat >4.588 mg/L 4 h (death occurred (3 out of 10 tested animals), dust, Source: ECHA)

11.2 Carcinogenicity:

International Agency for Research on Cancer (IARC)

Chemical Name	CAS Number	Classification
	No data found.	

National Toxicology Program (NTP)

Chemical Name	CAS Number	Classification
	No data found.	

U.S. OSHA specifically regulated carcinogens

Chemical Name	CAS Number	Classification
	No data found.	

11.3 Additional Toxicology Information:

Toxic if swallowed, in contact with skin or if inhaled. Causes serious eye irritation. May cause drowsiness or dizziness. May damage fertility or the unborn child. May cause damage to organs. Causes damage to organs through prolonged or repeated exposure.

SECTION 12: Ecological Information

12.1. Ecotoxicity

Chemical Name	CAS Number	Species	Exposure	Toxicity
Methyl Alcohol	67-56-1	Earthworm	Acute	LC50 48 h Eisenia foetida >1 mg/cm2 [filter paper] (IUCLID)
Methyl Alcohol	67-56-1	Freshwater Fish	Acute	LC50 96 h Pimephales promelas 28200 mg/L [flow-through] (EPA); LC50 96 h Pimephales promelas >100 mg/L [static] (EPA); LC50 96 h Oncorhynchus mykiss 19500 - 20700 mg/L [flow-through] (EPA); LC50 96 h Oncorhynchus mykiss 18 - 20 mL/L [static] (EPA); LC50 96 h Lepomis macrochirus 13500 - 17600 mg/L [flow-through] (EPA)
Iodine	7553-56-2	Freshwater Fish	Acute	LC50 96 h Oncorhynchus mykiss 1.67 mg/L [static] (ECHA)

12.2. Persistence and Degradability

Data not available.

12.3. Bioaccumulative Potential

Data not available.

12.4. Mobility in soil

Data not available.

12.5. Other Adverse Ecological Effects

Data not available.

SECTION 13: Disposal Considerations

13.1. Waste Treatment Methods

Data not available.

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SECTION 14: Transportation Information

14.1 Transportation by Land - Department of Transportation (DOT, United States of America)

Sizes: 1 L, 6 L, 220 mL, 500 mL, 3000 mL

UN Number: UN1230

Proper Shipping Name: Methanol Solution

Hazard Class: 3

Packing Group: II

Hazard Label(s):

14.2 Transportation by Air - International Air Transport Association (IATA)

Sizes: 1 L, 6 L, 220 mL, 500 mL, 3000 mL

UN Number: UN1230

Proper Shipping Name: Methanol Solution

Hazard Class: 3 (6.1)

Packing Group: II

Hazard Label(s):

14.3 Transportation of Dangerous Goods (TDG, Canada)

Sizes: 1 L, 6 L, 220 mL, 500 mL, 3000 mL

UN Number: UN1230

Proper Shipping Name: METHANOL SOLUTION

Hazard Class: 3

Packing Group: II

Hazard Label(s):

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SECTION 15: Regulatory Information

15.01. Occupational Safety and Health Administration (OSHA) Hazards

Chemical Name	CAS Number	Regulatory Information
		No data found.

15.02. Superfund Amendments and Reauthorization Act (SARA) 302 Extremely Hazardous Substances

Chemical Name	CAS Number	RQ
		No data found.

15.03. Superfund Amendments and Reauthorization Act (SARA) 311/312 Hazardous Chemicals

Chemical Name	CAS Number	Regulatory Information
Methyl Alcohol	67-56-1	5000 lb final RQ; 2270 kg final RQ

15.04. Superfund Amendments and Reauthorization Act (SARA) 313 Toxics Release Inventory (TRI)

Chemical Name	CAS Number	List	Regulatory Information
Methyl Alcohol	67-56-1	Emission Reporting	1.0 % de minimis concentration

15.05. Massachusetts Right-to-Know Substance List

Chemical Name	CAS Number	Regulatory Information
Methyl Alcohol	67-56-1	Present
Iodine	7553-56-2	Present

15.06. Pennsylvania Right-to-Know Hazardous Substances

Chemical Name	CAS Number	Regulatory Information
Methyl Alcohol	67-56-1	Environmental hazard
Iodine	7553-56-2	Present

15.07. New Jersey Worker and Community Right-to-Know Components

Chemical Name	CAS Number	Regulatory Information
Methyl Alcohol	67-56-1	sn 1222
Iodine	7553-56-2	sn 1026

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15.08. California Proposition 65

Chemical Name	CAS Number	Regulatory Information
Methyl Alcohol	67-56-1	developmental toxicity, 3/16/2012

15.09. Canada Domestic Substances List / Non-Domestic Substances List (DSL/NDSL)

Chemical Name	CAS Number	List	Status
Methyl Alcohol	67-56-1	DSL	Present
Methyl Alcohol	67-56-1	NDSL	"Present" As Alcohols, C1-3 [68475-56-9]
Iodine	7553-56-2	DSL	Present

15.10. United States of America Toxic Substances Control Act (TSCA) List

Chemical Name	CAS Number	Status
Methyl Alcohol	67-56-1	Present (ACTIVE)
Iodine	7553-56-2	Present (ACTIVE)

15.11. European Inventory of Existing Commercial Chemical Substances (EINECS), European List of Notified Chemical Substances (ELINCS), and No Longer Polymers (NLP)

Chemical Name	CAS Number	List	Number
Methyl Alcohol	67-56-1	EINECS	200-659-6
Iodine	7553-56-2	EINECS	231-442-4

15.12. China - Inventory of Existing chemical Substances (IECSC)

Chemical Name	CAS Number	Status
Methyl Alcohol	67-56-1	Present [16735]
Iodine	7553-56-2	Present [05736]

15.13. Korea - Existing Chemicals Inventory (KECI/KECL)

Chemical Name	CAS Number	List	Status
Methyl Alcohol	67-56-1	Annex 1	Present [KE-23193]
Iodine	7553-56-2	Annex 1	Present [KE-21023]

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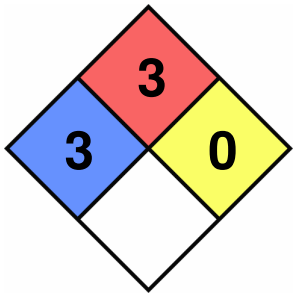
15.14. Japan - Existing and New Chemical Substances Inventory (ENCS)

Chemical Name	CAS Number	MITI No.
Methyl Alcohol	67-56-1	(2)-201
Iodine	7553-56-2	- (exempt)

SECTION 16: Other Information

16.1 National Fire Protection Associate (NFPA) Rating

Health: 3
Flammability: 3
Reactivity 0
Special Hazard:



16.2 Document Revision

Last Revision Date:
2026-05-24

DISCLAIMER

When handled properly by qualified personnel, the product described herein does not present a significant health or safety hazard. Alteration of its characteristics by concentration, evaporation, addition of other substances, or other means may present hazards not specifically addressed herein and which must be evaluated by the user. The information furnished herein is believed to be accurate and represents the best data currently available to us. No warranty, expressed or implied, is made and RICCA CHEMICAL COMPANY assumes no legal responsibility or liability whatsoever resulting from its use.